

United States Panel

Discussion

CHAIRMAN PERKINS: My clock tells me that in order to get back up the speed, we have about 5 minutes for some questions on our statements and I am prepared to entertain anybody who wishes to address a question to the three panelists. Please raise your hand and step to the nearest microphone.

DR. KIDA (*Dokkyo University*): I have a question for Dr. Hester. Support from companies at first took the form of cash, but recently there is more material donations. I think you mentioned this point in your presentation. Companies are providing not only cash but they are contributing to the universities through material goods. Does this mean that companies are providing or selling the goods to the universities at a discounted price or do they provide a whole facility or whole equipment free of charge to the universities? What do you mean by this "material contribution" from companies to universities?

DR. HESTER: The tax law change in 1981, I believe, had to do with real contributions, real gifts. However, some computer companies, wanting to make sure that their computers are well understood and appreciated by both faculty and students, have sold their products to colleges and universities at a discounted rate. I do not know whether that discount is considered a contribution. I do not think so.

DR. SAWYER: I think the contribution has to be a genuine gift.

DR. HESTER: There have also been gifts of various factory sites that had become redundant due to the many mergers and takeovers in American corporations. So there have been gifts of land and technical facilities which also count as corporate contributions.

DR. KIDA: Thank you very much for your answer. When computers are provided to universities, then, they are at a discounted price? I believe this is one of the major issues of Japan-U.S. trade frictions. If American companies are selling computers to American universities at a discounted price, I hope this can contribute to reducing the friction between our countries.

DR. HESTER: I have also contributed this information at a discounted price.
(Laughter)

DR. BIENAYME: To what extent are the potential dangers that you are pointing out concerning the collaboration between the corporations and the universities in fact real? Do you know if come contributions have been examined in order to assess the reality of the dangers?

DR. SAWYER: Some of the dangers that have been asserted have to do with the shift of emphasis of university research from basic to applied research. According to figures provided by the National Science Foundation, this trend has not occurred thus far. In fact, between 1979 and 1987, the amount of funds that have gone into applied research have decreased by about 33.4% falling to 32.1%. So that particular danger has not yet been realized.

However, I would suggest that as a result of even greater pressure on U.S. corporations to be competitive in the global market as that market itself becomes more competitive as a result of Europe 1992, there maybe a possibility of this danger occurring. We heard this morning about the kinds of things that Japan well might be doing in the future to continue to be a competitive, industrializing country. Quite clearly, competition in the international arena is going to become even more fierce. And that situation might well lead to the siphoning of research funds away from basic research to applied research.

Another real danger to be stressed is in the area of conflict of interest. I do not know how many cases have occurred, but there have been examples of individual researchers engaging in research that they otherwise might not have

taken up had they not at the same time been officers in outside corporations. By the way, this example demonstrates I think the validity of what I have said earlier -- that we do not really have a good sense of how much of this kind of activity takes place. Further studies are very much needed.

There is also the problem of proprietary knowledge. I think this has to be mentioned because universities are interested in communicating the results of their researches as quickly as possible while corporations want to have retain exclusive rights to the research. There is a whole range of those dangers, none of which I am now able to document in terms of magnitude -- but they are there.

CHAIRMAN: Dr. Kerr will make the last comments on this U.S. presentation. Clark Kerr.

DR. KERR: In terms of fraud -- trying to get away with something that is wrong -- I think that is an extremely minor problem and in the science field is almost certain to be caught. There are, however, other problems. One is getting people to give first priority to their university service, to meeting their classes, rather than going out and consulting some place. It is becoming increasingly difficult to get people to serve on committees -- they say "I've got to be here, I've got to be there, I've got to be some place else, and nobody rewards me for committee service." The quality of good citizenship is terribly important to the university. One of my major concerns about American research universities is the lowering of the sense of citizenship. So that is a real problem.

Another problem is using university facilities for private advantage. Let me give you one illustration. A very famous professor of engineering was using the material testing laboratory in competition with private industry to test materials, charging a personal fee not only for his own time but also for the use of the university facilities. There is a very considerable use of university laboratories and other facilities in connection with outside consulting work that the person then makes a profit on. This situation is a major concern.

There is in the United States a decrease in the public respect for higher education in part because of the type of things which I have been mentioning. Another major difficulty is when faculty members undertake research on university time with university facilities and then give the results first to a corporation and do not publish it for six months. Massachusetts General Hospital, affiliated with Harvard University, signed a contract with a Japanese cosmetics firm that their research should be made available only to this cosmetics firm. And it is a grave danger that more and more research is going to be held back while giving it to a single corporation, usually the large and wealthy corporations and not to small business. The University of California does much more research for the large-scale agricultural interests -- the huge corporations -- than it does for the small-scale farmers. They develop machines which can harvest a thousand acres of tomatoes but that do nothing for the small farmer. That is causing trouble.

So the absence of the openness of research is a problem. If research is done on university time with university facilities, it should belong to everybody. There are some scandals now. There are going to be more and the reputation of American higher education is going to go down because of it.

Another problem is doing research which is against the public welfare. I reviewed a case in agriculture where the University of California was making studies of how many lemons should be destroyed by the lemon growers in California to raise the price to maximizing net profits. Should that be done by a public university, a land-grant university established to help the people of the entire nation?

I think there are some real problems and I think we badly need a code of ethics. If I were developing a code of ethics it would have at least these aspects to it: 1) The university professor owes full duty to his institution, his university, before he undertakes outside work. 2) The university professors cannot use university facilities for private profit. 3) All research undertaken on university time and with university facilities should become public from the beginning, made available to everybody at once and right away. 4) The university should be careful to scrutinize the research that goes on within it to

be sure that it cannot be held to be against the public interest. 5) Faculty members who are engaged in corporate arrangements should register that connection with their department chairman so that none of it can be considered by the public to be undertaken in a secret way and possibly against the public interest.

So, I would agree that by and large the connection with the corporation, at least in the United States, has been advantageous to the American economy. It also has some advantages to higher education. However, unless we are very careful, we can run into a small number of scandals which will in the long run be more costly to higher education in terms of loss of public support than any of our immediate gains. In other words, we have to be very careful that we do not sell our souls for small amounts of money in the short run, agreeing with the devil to get certain immediate benefits but at the long run cost of losing our reputation for integrity.

CHAIRMAN PERKINS: Thank you, Clark. This ends the American session.